

SUPPLEMENTARY TABLE 3. Effectiveness of updated 2023–2024 (monovalent XBB.1.5) COVID-19 vaccination against laboratory-confirmed COVID-19–associated hospitalizations among adults aged ≥18 years, including control-patients with positive or indeterminant influenza test results — VISION and IVY Networks, September 2023–January 2024

Network/age group, yrs/COVID-19 vaccination dosage pattern	No. (Col %)		Median interval since last dose for vaccinated, days (IQR)	VE* % (95% CI)
	COVID-19 case-patients	COVID-19 control-patients		
VISION				
≥18				
No updated dose [†] (Ref)	4,194 (91)	30,282 (87)	633 (385 to 768)	Ref
Received updated dose	395 (9)	4,451 (13)	43 (25 to 63)	51 (46 to 57)
7–59 days earlier	270 (6)	3,189 (9)	32 (19 to 45)	52 (46 to 58)
60–119 days earlier	125 (3)	1,262 (4)	73 (66 to 82)	49 (38 to 58)
18–64				
No updated dose [†] (Ref)	938 (96)	12,111 (94)	687 (450 to 832)	Ref
Received updated dose	38 (4)	711 (6)	39 (22 to 59)	41 (17 to 58)
7–59 days earlier	28 (3)	535 (4)	30 (19 to 44)	40 (12 to 60)
60–119 days earlier	10 (1)	176 (1)	75 (67 to 82.75)	43 (–9 to 70)[§]
≥65				
No updated dose [†] (Ref)	3256 (90)	18171 (83)	554 (372 to 747)	Ref
Received updated dose	357 (10)	3740 (17)	43 (25 to 63)	52 (46 to 58)
7–59 days earlier	242 (7)	2654 (12)	33 (20 to 46)	54 (47 to 60)
60–119 days earlier	115 (3)	1086 (5)	73 (66 to 81)	49 (38 to 59)
IVY				
≥18				
No updated dose [†] (Ref)	1100 (92)	3024 (88)	652 (392 to 789)	Ref
Received updated dose	94 (8)	410 (12)	48 (26 to 72)	39 (22 to 53)
≥65				
No updated dose [†] (Ref)	747 (91)	1463 (84)	582 (378 to 755)	Ref
Received updated dose	76 (9)	279 (16)	49 (27 to 73)	45 (27 to 59)

Abbreviations: IVY = Investigating Respiratory Viruses in the Acutely Ill; Ref = referent group; updated = updated (2023–2024) monovalent COVID-19 vaccine; VE = vaccine effectiveness; VISION = Virtual SARS-CoV-2, Influenza, and Other respiratory viruses Network.

* VE was calculated as $(1 - \text{odds ratio}) \times 100\%$ with odds ratios calculated using multivariable logistic regression. For VISION, the odds ratio was adjusted for age, sex, race and ethnicity, geographic region, and calendar time (days since January 1, 2021). For IVY, the odds ratio was adjusted for age, sex, race and ethnicity, calendar time in biweekly intervals, and U.S. Department of Health and Human Services region.

[†] The “no updated dose” group included all eligible persons who did not receive an updated (2023–2024) COVID-19 vaccine dose, regardless of number of previous (i.e., original monovalent and bivalent) doses received (if any).

[§] Some estimates are imprecise, which might be due to a relatively small number of persons in each level of vaccination or case status. This imprecision indicates that the actual VE could be substantially different from the point estimate shown, and estimates should therefore be interpreted with caution. Additional data accrual could increase precision and allow more precise interpretation.